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मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 9094-1 (1979): Drill Chuck Taper Arbors, Part I: Having Taper Shanks [PGD 2: Machine Tool Elements and Holding Devices]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

SPECIFICATION FOR
DRILL CHUCK TAPER ARBORS

PART I HAVING TAPER SHANKS

1. Scope — Covers dimensions and material requirements for drill chuck taper arbors of Morse taper type and Jacobs taper type.

Note — For drill chuck taper details, see IS : 2243-1971 'Specification for drill chucks (first revision)'.

3. Dimensions

2.1 Morse Taper Type

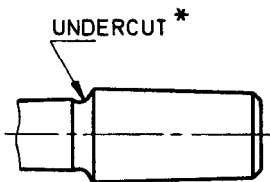
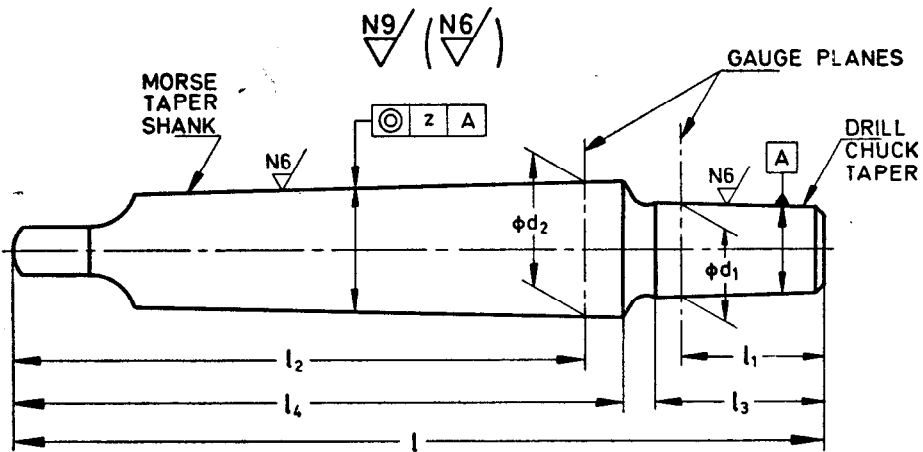


FIG. 1 TAPER SHANK $<$ DRILL CHUCK TAPER



FIG. 2 TAPER SHANK $=$ DRILL CHUCK TAPER

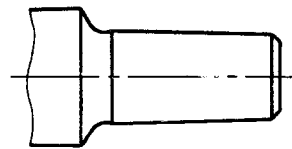


FIG. 3 TAPER SHANK $>$ DRILL CHUCK TAPER

*Undercut is to be matched with the dimension of the Morse Taper.

Machine Tools, Machine Tool Elements and Woodworking Machines Sectional Committee, EDC 11; Chucks Subcommittee, EDC 11 : 5 [Ref : Doc : EDC 11 (2876)]

All dimensions in millimetres.

Designation of Drill Chuck Taper	Taper Shank Morse Taper*	d_1 k9	d_2	l Approx	l_1	l_2	l_3	l_4	Z	Form According to Fig.
B10	0	10.094	9.045	79	14.5	56.5	18	59.5	0.02	1
	1		12.065	86		62		65.5		3
	2		17.780	105		75		80		
B12	0	12.065	9.045	84	18.5	56.5	22	59.5	0.02	1
	1		12.065	89		62		65.5		2
	2		17.780	106		75		80		3
B16	1	15.733	12.065	99	24	62	29	65.5	0.02	1
	2		17.780	112		75		80		3
	3		23.825	134		94		99	0.03	
B18	1	17.780	12.065	107	32	62	37	65.5	0.02	1
	2		17.780	119		75		80		2
	3		23.825	140		94		99	0.03	3
B22	2	21.793	17.780	130	40.5	75	45.5	80	0.03	1
	3		23.825	147		94		99		3
	4		31.267	176		117.5		124		
B24	3	23.825	23.825	157	50.5	94	55.5	99	0.03	2
	4		31.267	186		117.5		124		3
	5		44.399	221		149.5		156	0.04	

*Morse taper according to IS : 1715-1973 'Dimensions for self-holding tapers (first revision) '.

2.2 Jacobs Taper Type

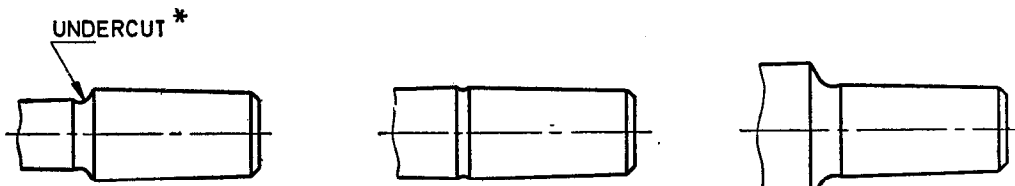
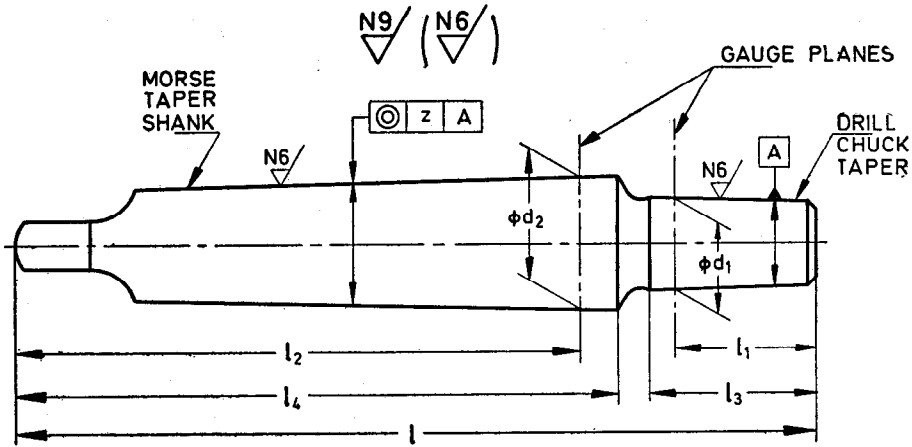


FIG. 1 TAPER SHANK < DRILL CHUCK TAPER

FIG. 2 TAPER SHANK = DRILL CHUCK TAPER

FIG. 3 TAPER SHANK > DRILL CHUCK TAPER

*Undercut is to be matched with the dimension of Morse Taper.

All dimensions in millimetres.

Drill Chuck Taper Jacob Taper No.	Taper Shank Morse Taper†	d_1 k9	d_2	l	l_1	l_2	l_3	l_4	Z	Form According to Fig.
0	0	6·350	9·045	77	11·11	56·5	14·5	59·5	0·012	3
	1		12·065	84		62		65·5		
	2		17·780	102		75		80		
1	0	9·754	9·045	82	16·67	56·5	20	59·5	0·02	1
	1		12·065	89		62		65·5		
	2		17·780	106		75		80		
2 short	0	13·940	9·045	85	19·05	56·5	22·5	59·5	0·02	1
	1		12·065	89		62		65·5		
	2		17·780	106		75		80		
2	1	14·199	12·065	95	22·22	62	27	65·5	0·02	1
	2		17·780	112		75		80		
	3		23·825	133		94		99		
33	1	15·850	12·065	98	25·40	62	29·5	65·5	0·02	1
	2		17·780	112		75		80		
	3		23·825	133		94		99		
6	1	17·170	12·065	98	25·40	62	29·5	65·5	0·02	1
	2		17·780	112		75		80		
	3		23·825	133		94		99		
3	2	20·599	17·780	117	30·96	75	36	80	0·03	1
	3		23·825	138		94		99		
	4		31·267	167		117·5		124		
(4)*	3	28·550	23·825	149	42·07	94	47	99	0·03	1
	4		31·267	174		117·5		124		
	5		44·399	215		149·5		156		
(5)*	4	35·890	31·267	180	47·62	117·5	52·5	124	0·04	1
	5		44·399	215		149·5		156		

*Sizes shown within brackets should be avoided wherever possible.

†Morse Taper according to IS : 1715-1973.

EXPLANATORY NOTE

Subsequent to the publishing of IS: 2243-1971, it has been observed that complete requirements of taper shanks for drill chucks are not covered in this standard. In order to cover these constructional dimensions, this standard has been prepared for which assistance has been drawn from DIN 238 (Sh 1) — 'Drill chuck mounting arrangements, taper arbors' issued by DIN, Deutsches Institut für Normung.

This standard, which forms Part I, covers drill chuck taper arbors having 'taper shanks' only. It is proposed to prepare standards for 'threaded shanks' and 'straight shanks' taper arbors separately which will form Part II and Part III of this standard respectively.